



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,327	01/09/2004	Gregory Weston Terpay	02708.0152.CNUS02	7476

7590 12/23/2004
Michael J. Bell
Howrey Simon Arnold & White LLP
Box No. 34
1299 Pennsylvania Ave., NW
Washington, DC 20004-2402

EXAMINER

SAN MARTIN, EDGARDO

ART UNIT PAPER NUMBER

2837

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,327

Applicant(s)

TERPAY ET AL.

Examiner

Edgardo San Martin

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/15/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 – 7, 9 –11, 13 – 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Pawelski (US 6,234,758).

With respect to claims 1 and 2, Pawelski teaches a hydraulic system of pressurized fluid for reducing noise (Fig.1; Abstract), the system comprising a fluid conduit (Fig.1, Item 20) for carrying the pressurized fluid; and a substantially rigid tubular element (Fig.1, Item 12) having an open end and a closed end, the open end of the tubular element attached to the fluid conduit so that the tubular element fills with the pressurized fluid in communication with the fluid in the system; the tubular element having an associated length and an associated cross-sectional area, the area and length of the tube are predetermined so that the fluid within the tube has a resonant condition at a frequency that is substantially the same as at least one frequency of the noise that is to be reduced in the hydraulic system (Col.3, Lines 5 – 35 and 64 – Col.5, Line 40).

With respect to claim 3, Pawelski teaches a substantially rigid tube (Fig.1, Item 12) having an open end and a closed end, the open end of the tube adapted to be attached to a hydraulic system (Fig.1, Item 10), the hydraulic system being configured to control an actuator (Fig.1, Item 18) using pressurized hydraulic fluid, the closed end of the tube being remote from the hydraulic system, the tube having an associated length and an associated cross-sectional area, the cross-sectional area and length of the tube being configured such that the hydraulic fluid within the tube has a resonant condition at a frequency that is substantially the same as at least one frequency of the noise that is to be reduced by the hydraulic system (Col.3, Lines 5 – 35 and 64 – Col.5, Line 40).

With respect to claim 3, the recitation *"A helicopter having a main rotor system including an engine, a transmission, a main rotor, and an airframe"* has been given little patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

With respect to claims 4 – 7, 13, 14 and 20, Pawelski teaches further comprising a cap (Fig.2, Item 54a) located proximate to the closed end of the tubular element; a rod (Fig.2, Item 74) configured to be inserted through the cap into the closed end of the tubular element and being configured to engage a movable piston (Fig.2, Item 76) within the tubular element, whereby a movement of the rod causes an associated movement of the movable piston, thereby changing a fluid column length; and wherein the cap

Art Unit: 2837

includes a threaded orifice (Fig.2, Item 55) and the rod is a threaded rod (Fig.2, Item 74a) (Col.5, Line 41 – Col.3, Line 34).

With respect to claims 9 – 11 and 15 – 18, Pawelski teaches further comprising a controller (Fig.1, Item 42), a sensor (Fig.1, Item 38), the sensor being configured to sense a quantity and to output a signal associated with the sensed quantity to the controller; an actuation system (Fig.1, Item 28), the actuation system being configured to receive a control signal output from the controller, the actuation system also being configured to control an actuator (Fig.1, Item 12) to reduce vibratory loads; wherein the actuator is configured to suppress vibratory loads produced by a system element based on a change in pressure within the hydraulic system; wherein the actuator includes an inlet, the inlet being configured to receive hydraulic fluid via the fluid conduit, and the tubular element being spaced proximate to the inlet such that a fluid line diameter is substantially constant between the tubular element and the inlet; and wherein the actuator is configured to receive vibratory loads include a shear load and a moment load (Fig.1; Col.4, Line 21 – Col.5, Line 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawelski (US 6,234,758).

Art Unit: 2837

With respect to claim 8, Pawelski teach the limitations discussed in a previous rejection, but fail to disclose wherein the substantially rigid tubular member is a steel tubular member.

Nevertheless, the Examiner consider that it would have been an obvious matter of design choice for the rigid tubular member to be made of steel, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With respect to claims 12 and 19, Pawelski teach the limitations discussed in a previous rejection, but fail to disclose wherein the actuator includes a bearing assembly and a piston, the bearing assembly being configured to prevent the shear load and the moment load from being fully imparted on the piston.

On the other hand, the Examiner takes Official Notice that it is well known in the art of machines design and machine elements design to employ a bearing assembly to reduce different types of stresses that could be formed in the machine system, increasing the performance of the machine and the durability of the machine elements.

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ a bearing assembly to prevent a shear load and a moment load from being fully imparted on the Pawelski piston because the bearing assembly would reduce the stresses formed in the machine system, increasing the performance of the machine and the durability of the machine elements.

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers that the patent to Pawelski teaches the limitations as described in the claims, as discussed above, including the new limitations added in the new set of dependent claims.

Conclusion

4. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2837

Contact Information

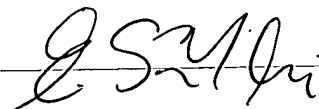
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martin
Patent Examiner
Art Unit 2837
Class 181
December 21, 2004